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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/710,675	11/09/2000	Yutao Zhou	32576	4806

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EXAMINER

GEMMELL, ELIZABETH M

ART UNIT PAPER NUMBER

2882

DATE MAILED: 04/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/710,675

Applicant(s)

ZHOU ET AL.

Examiner

Beth Gemmell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 January 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Receipt is acknowledged of amendments filed 21 January 2003.

The indicated allowability of claims 10 and 17-19 from previous Office Action (paper number 3) is withdrawn in view of recognition that Tyler et al. (US Patent 4,451,873) and Bishop et al. (US Patent 6,161,946) teach the subject matter of claims 10 and 17-19. Any inconvenience is regretted. Rejections based on the newly cited references are below.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 1-4,6,11,13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walsh in view of Tyler et al. (US Patent 4,451,873).

Re claim 1: Walsh discloses a reflector lamp comprising a glass shell (figure 1, 1), a base (figure 1, 6), a wire lamp (figure 1, 14), and a heat shield (figure 1, 19), the



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wire lamp being disposed within the glass shell, the glass shell having a concave inner surface and an outer surface (column 2, lines 8+), the glass shell having a thickness, the glass shell having a reflective coating disposed on the inner surface (figure 1, 18), the glass shell having a bottom, an opening at the bottom, a base extending from the bottom of the glass shell, the opening and the base defining a nose chamber (figure 1, 21), the heat shield being disposed substantially within or adjacent to the nose chamber (column 2, lines 30+).

Walsh fails to disclose the nose chamber having an exhaust hole adapted for the passage of an exhaust tube therethrough in the base of the nose chamber, the exhaust hole being substantially offset from the center of the base of the nose chamber.

Tyler et al. discloses an exhaust hole adapted for the passage of an exhaust tube therethrough in the base of the reflector, the exhaust hole being substantially offset from the center of the base of the reflector.

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the lamp disclosed by Walsh with that of an exhaust hole adapted for the passage of an exhaust tube therethrough in the base of the reflector, the exhaust hole being substantially offset from the center of the base of the reflector in order to improve the process of evacuating or flushing the lamp and then refilling the lamp (column 6, lines 2+).

Re claim 2: Walsh discloses the concave inner surface being substantially parabolic (column 2, lines 26+).

Re claim 3: Walsh discloses the heat shield positioned to substantially complete the parabolic inner surface (column 2, lines 30+).

Re claim 4: Walsh discloses the heat shield having a concave curved-shape (column 2, line 34).

Re claim 6: Walsh discloses the heat shield comprising a substrate and a reflective coating disposed on the substrate (column 2, lines 36+).

Re claim 11: Walsh discloses a reflective coating on the substrate comprising at least one metal selected from the group consisting of silver, gold, white gold, aluminum, and chromium (column 2, lines 36+).

Re claim 13: Walsh discloses the heat shield which is placed in the gap (figure 1, 21) of the neck, therefore it is within the range disclosed in the instant claim.

Re claim 14: Walsh discloses the heat shield positioned below the opening at the bottom of the glass shell within 4 mm thereof (column 2, lines 30+).

Claims 1,2, and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zalar et al. in view of Tyler et al. (US Patent 4,451,873).

Re claim 1: Zalar et al. discloses a reflector lamp comprising a glass shell (figure 1, 10), a base, a wire lamp (figure 1, 34), and a heat shield (figure 1, 60), the wire lamp being disposed within the glass shell, the glass shell having a concave inner surface and an outer surface, the glass shell having a thickness, the glass shell having a reflective coating disposed on the inner surface (figure 1, 20), the glass shell having a bottom, an opening at the bottom, a base extending from the bottom of the glass shell, the opening and the base defining a nose chamber (figure 1, 22), the heat shield being disposed substantially within or adjacent to the nose chamber (column 5, 32+), the nose chamber having an exhaust hole adapted for the passage of an exhaust tube therethrough in the base of the nose chamber (figure 1, 54)

Zalar et al. fails to disclose the exhaust hole being substantially offset from the center of the base of the nose chamber.

Tyler et al. discloses, in figure 6, an exhaust hole being substantially offset from the center of the base of the reflector (72).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the lamp disclosed by Zalar with that of an exhaust hole being substantially offset from the center of the base of the reflector in order to improve the process of evacuating or flushing the lamp and then refilling the lamp (column 6, lines 2+).

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Re claim 2: Zalar et al. discloses the concave inner surface being substantially parabolic (column 3,39).

Re claims 7, 8 and 9: Zalar et al. discloses the nose chamber having a plurality of holes disposed in the base thereof; wherein the number of holes is three; wherein two of the holes are adapted for the passage of ferrules therethrough (figure 1, 48 and 50), and one of the holes is the exhaust hole (figure 1, 54).

Claims 5,12 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walsh, in view of Tyler et al.

Walsh and Tyler et al. disclose all the limitations as evidenced above.

Walsh and Tyler et al. fail to disclose the reflective coating on the substrate to be stainless steel or chromium.

Absent of showing criticality, the choice and substitution of one well known reflective material for another would have been obvious to one of ordinary skill in the art. Specifically, Walsh teaches the use of a reflective coating. As evidenced by the applicants claims to the use of either stainless steel or chromium, one of ordinary skill in the art at the time the invention was made would have recognized that stainless steel or chromium are art functional equivalents because the substitution of the stainless steel or chromium for the reflective coating would not alter the function of the reflection coating and would still reflect the light emitted from the lamp.

Claim 15-19,24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zalar et al. in view of Bishop et al. (US Patent 6,161,946).

Re claims 15 and 17: Zalar et al. discloses a reflector lamp comprising a glass shell (figure 1, 10), a base, and a wire lamp (figure 1, 34), the wire lamp being disposed within the glass shell, the glass shell having a concave inner surface and an outer surface, the glass shell having a reflective coating disposed on the inner surface (figure 1, 20), the glass shell having a bottom, an opening at the bottom forming the top of a slot in the base (the top of the slot being the transition between the reflector and the nose chamber).

Zalar et al. fails to disclose the opening having a major diameter and a minor diameter, the major diameter being substantially longer than the minor diameter the wire lamp extending into the slot.

Bishop et al. discloses a rectangular opening (figure 1, 130).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the lamp disclosed by Zalar et al. with that of Bishop et al. because by using an opening having a major diameter and a minor diameter, the major diameter being substantially longer than the minor diameter the opening can properly receive the lamp, increasing the alignment of the lamp therefore the overall brightness would increase.

Re claims 16: Zalar et al. discloses the slot having three openings in the base thereof (figure 1, 48, 50 and 54).



Re claims 18 and 19: Zalar et al. and Bishop et al. disclose all the limitations as evidenced above.

However, they fail to teach the use of the slot having an elliptical or cross-shaped cross-section.

Absent of showing criticality, the choice and substitution of one well know functional equivalent slot opening for another would have been obvious to one of ordinary skill in the art at the time the invention was made. Specifically, Bishop et al. teaches the use of an opening having a major and minor diameter. As evidenced by applicants claim to different shapes of openings, one of ordinary skill in the art at the time the invention was made would have been motivated to use different shapes in order to properly fit the lamp into the reflector to increase the brightness of the lamp.

Re claims 24 and 25: Zalar et al. and Bishop et al. show all the limitations as evidenced above.

However, they fail to teach an exact size of the opening.

Absent of showing criticality, the choice and substitution of one well known functional equivalent slot opening size for another would have been obvious to one of ordinary skill at the time the invention was made. One of ordinary skill in the art would have recognized the size of the opening is an art recognized equivalent because the variation of the size would depend on the size of the lamp and would not alter the

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function of the lamp to properly fit the lamp into the reflector to increase the brightness of the lamp.

Claims 20,21 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ooms (US Patent 5,506,464).

Re claim 20: Ooms discloses, in figure 1 and throughout the disclosure, a reflector lamp comprising a glass shell (column 3, lines 49+), a lamp (10), and a flange (5), the lamp being disposed within the glass shell, and the glass shell having a concave inner surface and an outer surface, the glass shell having a reflective coating (3) disposed on the concave inner surface, the flange extending from the outer surface of the glass shell and defining a perimeter of a chamber, an inwardly extending annular over hang portion (6) of the glass shell extending over the chamber and being substantially continuous with the glass shell, the overhang portion having an inner surface coated with the reflective coating (column 4, lines 9+), the overhang portion having an opening therethrough in communication with the chamber.

Ooms fails to disclose a wire lamp.

One of ordinary skill in the art at the time the invention was made would have recognized that the use of an electric lamp is an art recognized functional equivalent because the substitution of the electric lamp for the wire lamp would not alter the function of the surface and would still be a light source for the reflection system.

Re claim 21: Ooms discloses, in figure 1 and throughout the disclosure, a glass cup (20) attached to the flange extending from the outer surface of the glass shell, the glass cup comprising a base, a wall extending from the base of the glass cup at a perimeter thereof, and a plurality of openings (22) extending through the base of the glass cup providing fluid connectivity between inner and outer surfaces thereof.

Re claim 22: Ooms discloses, in figure 1 and throughout the disclosure, the flange is integrally formed as a part of the glass shell (5).

Re claim 26: Ooms discloses the wall of the glass cup and the flange extending from the glass shell having substantially the same diameter (figure 1, 5 and 20) the wall of the glass cup being permanently attached to the extending flange (19).

The examiner notes that the claim limitation "by glass fritting" is drawn to a process of manufacturing, which is incidental to the claimed apparatus. It is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation. Consequently, absent of showing an unobvious difference between the claimed product and the prior art, the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113)

***Allowable Subject Matter***

Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The best prior art of record teaches conventional reflector lamps, however they fail to teach or fairly suggest a nose chamber having a diameter of less than 1 inch.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beth Gemmell whose telephone number is (703) 305-1937. The examiner can normally be reached on Monday-Thursday 6:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

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April 4, 2003

A handwritten signature in black ink, appearing to read "David Bruce", with a stylized flourish at the end.

**DAVID V. BRUCE**  
**PRIMARY EXAMINER**